FLUKE networks

NETWORKSUPERVISION

service installation and maintenance

The next generation starts here

with Telecom Network SuperVision solutions to build, manage and maintain a ***leading edge***.

preventive maintenance

service assurance

trouble handling and fault management

The Opportunity – and the Challenge

Today it's more critical than ever to drive revenue growth by delivering new services. Communication service providers are using new technologies such as VDSL, PON, IPTV, VoIP and MPLS to roll out next-generation services that help them aggressively grow revenue, secure their customer base and deter competition.

But the transition to new services brings challenges. High-end services bring high customer expectations. Reducing operating costs in your core business while you fund new network deployment and deal with competitors is not easy. Will you be able to manage legacy-network spending, deliver next-gen services and keep your customers happy?

Your response will determine how readily customers adopt these high-revenue services. How long they stay with you.

And, how successfully you compete.

Your Challenges – Our Core Competency

Only Fluke Networks brings together the Operational Support Systems, Centralized Monitoring and Field Test solutions that deliver the business-transforming results you need to address the challenges ahead. We work closely with companies like yours to reduce their costs of existing operations and help them address the challenges of deploying new technologies.

Network SuperVision Solutions™ performance built on experience

Fluke Networks' solutions for the access network solve problems and create value for service providers worldwide.

- Major carriers use the Fluke Networks Predictor® solution every day to monitor more than 150 million lines, identify emerging problems and resolve them before they impact service.
- Our Trouble Handling OSS Suite is helping one local service provider cut its trouble rate well below the industry average and clear 97 percent of problems within 24 hours. Recovery after a major storm used to take days. Now it takes just hours.
- Our mission critical COMPAS Service Provisioning systems have allowed a major carrier to dramatically reduce service provisioning costs and increase service order flow-through rate to 95%.
- The Fluke Networks EXP™ Technician Productivity Solution resolves POTs and DSL troubles prior to service activation and ensures all service turn-ups are completed correctly the first time, every time, reducing repeat dispatches by up to 36 percent.
- ADSL2/2+ and VDSL network deployments go dramatically faster with our NetDSL® System. You can qualify an entire neighborhood for service in a single day.

Managing Today and Making the Transition

Part of transitioning your business is improving legacy processes. Targeted initiatives for process improvement can uncover important opportunities to reallocate staff and reduce the cost of provisioning, administration, support and maintenance for legacy networks. You can free up the resources you need to drive your next-gen transition forward.

Fluke Networks' test tools and solutions for provisioning, preventive maintenance, trouble handling and fault management of your access network can deliver both immediate cost reductions and sustainable process improvement. These systems enable your new business to grow and profit without the burden of outdated legacy processes. We deliver comprehensive solutions to help you build, manage and maintain your next generation network, streamlining process flows and driving cost out of your business.

We help you achieve your business objectives.

Deliver Tomorrow – Build, Manage, Maintain

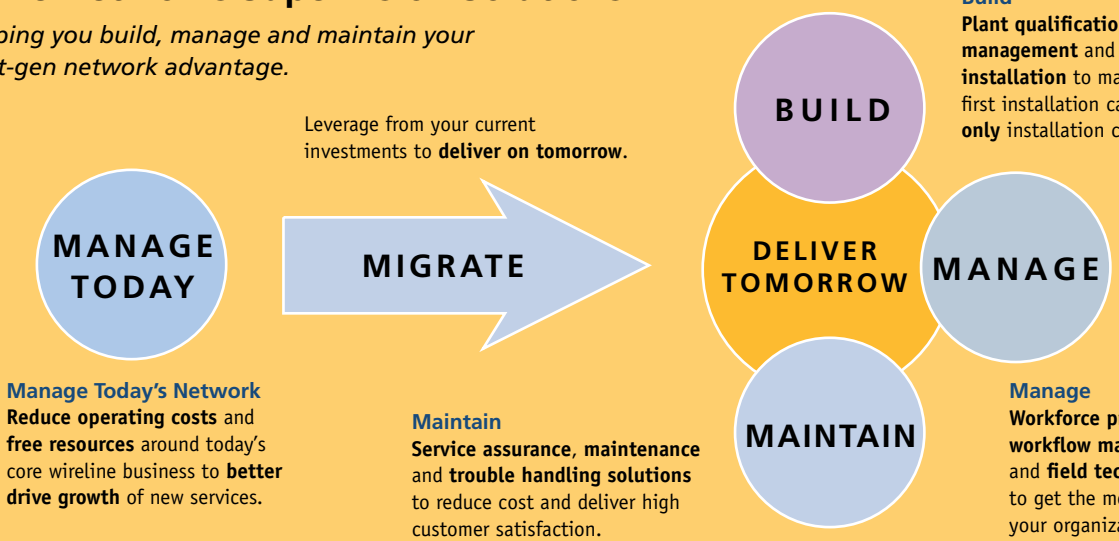
As you plan your company's strategy to make next-generation carrier services pay off, there are important decisions you need to make and questions you need to ask.

- Will customers accept the same service activation and repair cycles for triple play services that they do today for traditional voice service? Or will they want more?
- How can you improve processes for supporting next-generation services by building on — not abandoning — your legacy system investments?
- Can your existing trouble handing and fault management processes support your planned bundled voice, video, data service offering?
- Are your I&M people, processes and test solutions ready to support new services?

We can answer these questions and help you **build** your network to deliver new advanced services, **manage** your processes and people and **maintain** the high level of service quality your customers expect.

Fluke Networks SuperVision Solutions

Helping you build, manage and maintain your next-gen network advantage.


Leverage from your current investments to **deliver on tomorrow**.
MANAGE TODAY
MIGRATE
BUILD
DELIVER TOMORROW
MANAGE
MAINTAIN
Build
Plant qualification, **records management** and **service installation** to make the first installation call the **only** installation call.
Manage Today's Network
Reduce operating costs and **free resources** around today's core wireline business to **better drive growth** of new services.
Maintain
Service assurance, **maintenance** and **trouble handling solutions** to reduce cost and deliver high customer satisfaction.
Manage
Workforce productivity, **workflow management** and **field technician solutions** to get the most out of your organization.

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Fluke Networks Support and Maintenance Services

Fluke Networks provides a range of support services to our customers to assist in the deployment of any of our programs or solutions. A full portfolio of training programs, extended warranty, field support, 24-hour technical support or program management solutions are available.

As part of our OSS offering, we also offer Tier 1, Tier 2 and Tier 3 support for our own solutions or other OSS solutions you may have in place. Our expertise in Telecom service provisioning, outside plant, trouble handling, preventive maintenance and service assurance provide us with the unique ability to bring real value to our customer's operations.

Kaizen, or "change for the good," is a way of life at Fluke Networks. We constantly seek ways to improve our internal processes and employ a rich set of tools we call DBS or "Danaher Business Systems" to accomplish this continuous process improvement. We also apply these same practices in serving our customers and can bring a wealth of expertise and tools in helping our customers identify and generate sustainable process improvements in their own businesses.

We help you find a better way.

Network SuperVision Solutions™

Fluke Networks, a Danaher company, provides innovative solutions for the testing, monitoring and analysis of telecommunications and enterprise networks and for the installation and certification of the fiber and copper foundation of those networks. Our comprehensive line of Network SuperVision Solutions™ provides network installers, owners and maintenance professionals with superior vision into their network, combining speed, accuracy and ease of use to optimize network performance. Headquartered in Everett, Washington, Fluke Networks has more than 500 employees worldwide and distributes our products in more than 50 countries.

Worldwide Support

Like our products, our support is closely coupled to your evolving needs, with an eye on keeping you on top of the latest technology advances.

- Global support in 22 countries
- Award-winning product performance reliability
- Support programs tailored to your needs
- Solutions that continually anticipate and evolve with your network, your business and your market opportunities

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Printed in U.S.A. 12/2005 2447235 B-ENG-N Rev A

FLUKE networks™

620 LAN CableMeter®

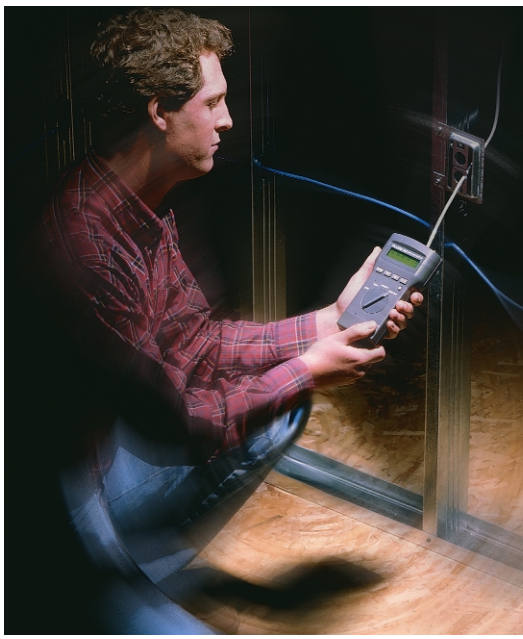
- *One person can verify each connection as he goes*
- *Tests all LAN cable types*
  - *UTP, STP, FTP, Coax*
  - *Two, three, or four wire pairs in twisted pair cables*
  - *Test all category UTP cables and hardware*
- *Verify end-to-end connectivity per EIA/TIA 568 wiring standard*
- *Detects wiring problems: opens, shorts, miswires (crossed, reversed, split pair)*
- *Locates wiring/connection errors (distance to the open or short)*
- *Measures cable length*
- *Easy to use:*
  - *Single rotary knob to select the test*
  - *Two line LCD display with backlight*
- *Handheld, long battery life (50 hours continuous)*

Test as you go

The Fluke Networks 620 LAN CableMeter verifies the correct termination, connection and routing of LAN cabling. The 620 can test whether a connection has been properly implemented without using a remote unit at the other end of the cable. This allows the installers to "test the connection as they go."

Upon completing a connection, the installer can immediately verify that this connection is defect-free using a 620. No termination or connector is required at the other end of the cable. From one end, the 620 can detect (1) an open circuit and the length to this open (applies to each pair in a twisted pair LAN cable), (2) a short and the distance to this short circuit, (3) a split pair condition (the 620 shows the actual pairing detected).

The installer saves time by diagnosing each connection right after completing that task. Installers don't have to postpone testing until all connections have been made. And, if the cable plant requires "certification," the final performance test on each cable channel will not be hampered or delayed by miswires, shorts, or opens. Wire termination errors can be identified as they occur and corrective action can be taken immediately without spending time in troubleshooting and fault isolation at cable plant "certification" time.



Verify cable routing

An installer can attach a "cable identifier" (optional) to a completed LAN connection to verify the cable routing and label, plus detect miswire possibilities such as reversed or crossed pairs in twisted pair cables.

Measurement capabilities

The following table summarizes the fault detection and fault location capabilities of the 620 LAN CableMeter without using a remote unit – called cable identifier – and with the cable identifier.

The one-person LAN cable verification tool

Technical Data

Operation

The 620 utilizes a two line LCD display (16 characters each). The display is equipped with a backlight to provide easy reading under all ambient light conditions. The Fluke Networks 620 implements three cable connectors: an RJ45 socket for UTP or FTP cable, a DB9 socket for IBM Type #1 STP cable, and a BNC connector for coax. The instrument is powered by two AA size 1.5 volt alkaline batteries. The battery life is 50 hours, not including the consumption of the backlight.

A Setup button provides the ability to select the cable type, wiring standard (e.g. 10Base-T, 2 pair), cable category and wire gauge of the cable to be tested. In addition, the setup menu allows the user to:

- Enable or disable the audible pass/fail sound.
- Adjust the display contrast.
- Calibrate the meter to a specific type of cable.
- Select the language on the display (English, French, German, Italian, Japanese, Spanish).
- Select the units for length reports (feet or meters).

The rotary selection switch offers three modes of operation:

1. Test provides a pass/fail report on the cable under test. In case a failure has been detected, the display offers additional diagnostic information.
2. Length provides the length of each pair (in case a twisted pair cable is being tested).
3. Wire Map provides the detail wiring for the cable.

Specifications

Length	
Range	1 to 999 ft or .5 to 300m
Resolution	1 ft or .5m
Accuracy	5% ± 3 ft or 5% ± 1m
Display	Feet or meters
Power	
Two AA size 1.5 volt alkaline batteries	
Battery life: 50 hours of continuous operation, not including backlight consumption	
Input protection	
The inputs withstand telephone ringing and loop voltages. The instrument warns the user with an “Active Cable” message and an audible warning tone.	
Size	7.25 in x 3.87 in x 1.8 in (18 cm x 9.8 cm x 4.6 cm)
Weight	12.5 oz (354g)
Warranty	1 year (extended warranty available)

Ordering Information

620 CableMeter
Includes: One Cable Identifier (#1), soft carrying case, user manual, quick reference card, warranty registration card, one patch cord (RJ45-to-RJ45 EIA/TIA 4 pair Cat 5), and one RJ45-to-RJ45 female coupler
Optional Accessories
N6201 Cable Identifiers #2 – #4
N6202 Cable Identifiers #5 – #8
N6203 STP (IBM Type 1) Cable kit
Kit contains: IBM Data Connector to DB9 male cable (IBM type 1, 3 ft/1m); IBM Data Connector to RJ45 adapter

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PDF 8/2001 1267561 D-ENG-N Rev B

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CableIQ, the first cabling bandwidth tester for network technicians.

As an IT professional, you have a tough balancing act. You're an on-the-spot problem solver. And you've got your eye on future enhancements, seamlessly upgrading the network to higher speeds, while optimizing the current infrastructure. All this without adding staff and while working with smaller budgets.

That's why Fluke Networks designed CableIQ – an easy-to-use cable troubleshooting and bandwidth qualification tester specifically for network technicians. It has all the power you need to see whether your cable is qualified to support 10/100, VoIP or Gigabit Ethernet and quickly solve network connectivity problems in one intuitive, handheld tool.

CableIQ™ Qualification Tester

The network tech's vision into cabling bandwidth.

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CableIQ: See network infrastructure problems quickly

- **Isolate cabling problems from network problems.** Save time and money by escalating fewer trouble tickets.
- **See existing cabling bandwidth.** Four-second test quickly determines if your existing cabling can support voice/10/100, VoIP or Gigabit Ethernet.
- **Troubleshoot cabling performance faults.** Determine why the existing cabling plant cannot support the desired network speed (e.g. connection fault at 7 feet).
- **Free up 10% or more of your switch ports.** Discover what is at the far end of any cable, whether it is an open cable, a PC, an analog phone, or switch.
- **Detect speed/duplex mismatches in a matter of seconds.** Determine a PC's duplex settings and compare settings to the connected switch – all from one location.
- **Isolate faults easier with intelligent wiremap.** Test for wiremap, length, shorts, split pairs or opens, and graphically see the distance to specific pin faults, such as "pin 1 break at 37 feet."
- **Locate cables and wires with superior accuracy.** Breakthrough IntelliTone™ digital signaling technology precisely locates cables in even the most chaotic wiring closet.
- **Empower frontline techs with an easy-to-use tool.** Intuitive user interface and graphical display guides users with little or no training required.
- **Avoid disputes over cause of network problems.** Save results or upload them to a PC with Cable IQ Reporter Software (included).

CableIQ gives network techs new vision into cabling bandwidth

CableIQ is the first cabling tool designed for network technicians who need to troubleshoot and qualify cabling bandwidth. It gives even the most novice tech vision to see what speeds existing cabling can support, quickly isolate cabling from network problems, and discover what is at the far end of any cable. That means network techs can close trouble tickets faster, reduce on-call time, and save money by better utilizing their existing infrastructure.

Reduce escalated problems by as much as 30%

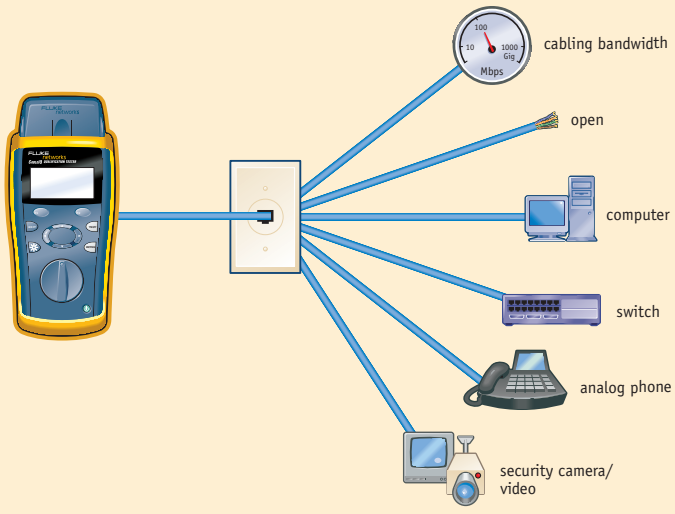
CableIQ's powerful troubleshooting capability and intuitive interface enable frontline technicians to identify and troubleshoot a wider range of infrastructure problems. Is the port active? Are the duplex settings matched? Is it a network problem or a cable problem? Can the cable support the required network bandwidth? CableIQ is the only tool that can answer all these questions before trouble tickets are escalated to the next level.

Troubleshoot cabling faults in half the time

CableIQ shows you whether your cabling is qualified to support the network's required bandwidth, and provides detailed information on the nature and location of cabling performance faults. Intelligent wiremap graphically displays the cable's wiring configuration, and shows the distance to opens and shorts. Advanced diagnostics also identifies and locates non-wiremap related connection faults, such as crosstalk or large impedance changes. Built-in IntelliTone digital technology allows you to tone and trace without disconnecting from the network. With CableIQ, your techs can close trouble tickets faster by cutting cable troubleshooting time in half.

Ensure a smooth transition to VoIP or Gigabit Ethernet

When you deploy Voice over IP (VoIP) or Gigabit Ethernet, you want to make sure the existing cabling will support the bandwidth requirements of your new equipment. Your cabling was certified, but moves adds and changes have rendered many links incapable of running desired speeds. CableIQ quickly reveals whether a link, including patch cords, is qualified for voice, 10/100BASE-T, VoIP, or Gig. Knowing your cabling's bandwidth capabilities before upgrading can prevent countless hours of future downtime and labor hours wasted on unnecessary troubleshooting.



CableIQ™ Qualification Tester

Unparalleled vision into cabling bandwidth

From the **worldwide leader** in network test.

Portable, lightweight, rugged ergonomic design for easy field use.

Discover mode detects and locates switches and shows link configuration (speed/duplex/pairing).

Cable bandwidth qualification. Find out in four seconds what bandwidth your cable can support.

Intelligent wiremap graphically shows distance to specific conductor fault.

Four AA batteries. Long lasting battery life for several weeks of testing.

Graphical display. Backlit for viewing in all environments.

Safely test on active network. Perform most cabling or network tests without having to disconnect.

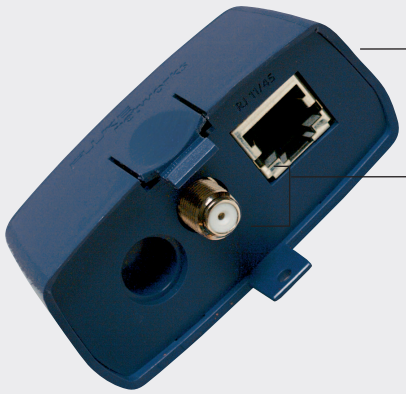
Store 250 results for later reviewing.

Digital or analog toning. Compatible with IntelliTone Probe for finding cables with superior precision.

Expert cabling diagnostics gives you detailed information on bandwidth faults.

Rotary knob makes learning easy and operation simple – you always know what test mode is selected.

USB port for fast transfer of data to PC or to reflash software.



Remote adapter
for testing existing copper cabling – doubles as a protective endcap.

RJ45 and F-Connector
tests voice/data/video/audio cabling.

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See what customers are saying about CableIQ:

"CableIQ's best feature is its ability to see cabling bandwidth. I had a PC that was locking up intermittenly. I plugged CableIQ into the link and found a Cat 3 patch cord. After swapping out the cord, the problem went away." – **Network Specialist**

"The ability to troubleshoot an active port is a timesaver – reducing the total time needed for problem resolution." – **Electronic Communications Staff Associate**

"If we put one of these in the hands of every frontline tech, we could save ourselves 30% in on-call time." – **Network Administrator**

CableIQ Qualification Tester

Model	Description
CIQ-100	**CableIQ Qualification Tester** includes CableIQ with remote adapter and soft carrying case
CIQ-KIT	**CableIQ Advanced IT Kit** includes CableIQ with remote adapter, IntelliTone 200 Probe, six remote office IDs, rugged carrying case
Accessories and options	
CIQ-IDK24	**CableIQ Remote Identifier Kit** includes three remote identifiers numbers 2-4
CIQ-IDK57	**CableIQ Remote Identifier Kit**, includes three remote identifiers numbers 5-7

Specifications

Cable types supported	UTP, STP, FTP, SSTP, RG6, RG59, audio, security
Qualification autotests	1000BASE-T, 100BASE-TX, 10BASE-T, VoIP, 1394b S100, TELCO, Wiremap only, Coax
Supported tests	Wiremap, length, cable signal performance, digital toner, analog toner, Ethernet port detection and identification, analog telephone detection, blink port light, continuity, speaker test, cable fault finding, video signal detection
Wiremap	Can detect single wire faults and supports MultiMap mode with up to seven remote office identifiers. Draws proportional wire length to breaks. Detects Split Pairs.
Find fault	Measures crosstalk and impedance and compares against appropriate limits based on qualification test selected. Detects location of large point sources as well as distributed sources in the cabling if they are sufficient to disqualify the application.
Results storage	Up to 250 qualification test results
Power	Battery type: 4 AA (NEDA 15A, IEC LR6) alkaline batteries
Battery life	20 hours of typical use, without backlight
Other battery types supported	4AA photo lithium, NIMH, NICAD
Dimensions and weight	7 in x 3.5 in x 1.75 in (17.8 cm x 8.9 cm x 4.5 cm) 1.2 lb (0.55 kg)

See the power of CableIQ in action

Experience the unique capabilities of CableIQ by taking a virtual test drive at **www.flukenetworks.com/seecableiq**. Or call us at **1-800-508-0490** (US and Canada), and let a Fluke Networks Systems Engineer show you how CableIQ technology can work for you. Visit **www.flukenetworks.com/contact** to locate Fluke Networks' sales organizations worldwide.

Free bonus gift with registration

Register your CableIQ and receive a bonus gift. Plus access to our Technical Assistance Center (TAC) and extensive online Knowledge Base for fast answers. Register today at **www.flukenetworks.com/register**.

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Printed in U.S.A. 12/2004 2132194 B-ENG-N Rev A

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DSP-4300 Digital CableAnalyzer™

The DSP-4300 Digital CableAnalyzer™ offers total Cat 6 solution:

- Exceeds specification requirements for Cat 5, Cat 5e and Cat 6 with Level III Accuracy, independently verified by both UL and ETL SEMKO
- Delivers more reliable PASS results with the new revolutionary Permanent Link Adapter – included with the DSP-4300
- Includes Cat 6 Channel Adapter and a Channel/Traffic Adapter so you're ready to test Cat 6 channel limits with DSP accuracy
- Automatically diagnoses cabling faults and shows exact locations in feet or meters
- Expanded 16 MB internal memory saves up to a full day's worth of testing (300 tests) if you forget your multimedia card, or fill up the card
- Download TIA-606A compliant Cable IDs to the DSP-4300 in the office to save time in the field and ensure accurate data
- Includes removable memory card and LinkWare™ Cable Test Management Software
- Optional Spool Test and Patch Cord Test Adapters verify cable and patch cord performance to the TIA/ISO Standards

And you have the assurance of performance, reliability and standards compliance backed and verified by both UL and ETL SEMKO.

The revolutionary Permanent Link Test Solution – included!

Our new DSP-LIA101S Permanent Link

Adapter delivers more passes. Eliminates costly false fail results due to worn twisted pair test leads. They develop internal wear and tear you can't see and before you know it – your link test fails. Falsely. That means wasted time in trouble-shooting. And blown re-testing costs. The new "non-twisted pair" design in our Permanent Link Adapter solves all that.

PM06 Personality Module certifies link and component compliance

The new DSP-4300 Pernament Link Adapter can be terminated with a choice of several personality modules to offer maximum flexibility and optimum test results. The DSP-4300 includes the standard PM06 Cat 6 Personality Module. The PM06 is the cabling industry's first centered, shielded test plug designed to certify link as well as connecting hardware compliance to the TIA/EIA-568-B.2-1 Cat 6 standard. The PM06 tests UTP, FTP and ScTP links and is the recommended solution for Cat 6, Cat 5e, Cat 5 and Cat 3 systems. No other solution allows you to see the true performance of the cabling system to achieve an "open" cabling system.

Channel Testing and Channel Traffic Monitoring

The DSP-4300 has you covered for Channel testing. Plug the Channel Adapter onto the DSP-4300 and you can test with confidence.

Network SuperVision into high-performance cabling systems.

DSP-4000 Series Selection Guide

	DSP-4300	DSP-4100	DSP-4000PL	DSP-4000
Standard DSP Package*	•	•	•	•
Cat 6/5E Permanent Link Adapters w/PM06	•	**	•	**
Cat 6/5E Channel Adapters	•	•	•	•
Cat 6/5E Channel/Traffic Adapter	•			
On-Board Memory–store up to 300 results	•		(summary test only; no graphical reports)	
MMC Card & Card Reader	•	•		
DSP-4300 Enhancement Kits				
DSP-4300E1 DSP-4100 to DSP-4300		•		
DSP-4300E0 DSP-4000 to DSP-4300			•	•

**Standard DSP-4000 Series Package refers to Main and Remote test units, Talk Sets (2), Instrument Straps (2), DSP Calibration Module, RS-232 Serial Cable, 8-pin modular to BNC adapter, Rechargeable NiMH battery packs (2), AC Adapter/Chargers (2), LinkWare Software, Users Information CD-ROM, Getting Started Guide, Quick Reference Card, warranty registration card, and rugged soft case.*

***Cat 5e Basic Link Adapters*

Ordering Information

Model	Items Included
DSP-4300	**DSP-4300 Digital CableAnalyzer™**
DSP-4000PL	**DSP-4000PL Digital CableAnalyzer™**
DSP-4000	**DSP-4000 Digital CableAnalyzer™**
LinkWare	**LinkWare™ Software** Free download from Fluke Networks' web site at www.flukenetworks.com/linkware

DSP-4000 Series Upgrades, Options and Accessories:

DSP-4300E1	**Enhancement Kit: DSP-4100 to DSP-4300** Includes expanded on-board memory (16 MB), software upgrade, LinkWare software, User Information CD and a Certified Calibration
DSP-4300E0	**Enhancement Kit: DSP-4000 to DSP-4300** Includes 16 MB Multimedia card, PC card reader, expanded on-board memory (16 MB), software upgrade, LinkWare software, User Information CD and a Certified Calibration
DSP-LIA101S	**Permanent Link Adapter Set with Cat 6 Personality Modules** Includes two interface adapters that plug into the high performance connector of the DSP-4000 Series and a set of the PM06 Cat 6 centered Personality Modules (Cat 6 8-pin modular plugs) to test Cat 6, Cat 5e, Cat 5 and Cat 3 links.
DSP-LIA100S	**Permanent Link Adapter Set** Includes two interface adapters that plug into the high performance connector of the DSP-4000 Series. Does not include any Personality Modules.
DSP-LIA101	**Permanent Link Adapter (1)** Includes one replacement adapter that plugs into the high performance connector of the DSP-4000 Series. Does not include any Personality Modules.
DSP-PCI-6S	**DSP Patch Cord Test Adapter Set**
DSP-SP00L	**DSP Spool Test Adapter (1)**
DSP-LIA012S	**Cat 6/5e Channel Adapter Set**
DSP-LIA013	**Cat 6/5e Channel/Traffic Adapter (1)**
DSP-PM06 New PM06	**Cat 6 Centered Personality Module** PM06 is the first centered, shielded plug to test Cat 6 compliance and interoperability. This global test solution supports all UTP, FTP and ScTP cabling systems, (Cat 3, Cat, 5, Cat 5e and Cat 6). Approved by major connectivity manufacturers, for complete list go to www.flukenetworks.com/pmmatrix
DSP-PMxx	**Personality Modules for IDC & Legacy Systems** A wide selection of personality modules are available for IDC-type connectors as well as legacy systems. For complete listing, go to www.flukenetworks.com/legacypms
DSP-FTA-420S	**Multimode Fiber Test Adapter** Uses LED light sources at 850 nm and 1300 nm
DSP-FTA430S	**Singlemode Fiber Test Adapter** Uses laser light sources at 1310 nm and 1550 nm wavelengths
DSP-FTA440S	**Gigabit Multimode Fiber Test Adapter** Uses a VCSEL source at 850 nm and laser source at 1310 nm

With Remote Connector Compensation™ (RC^2) you'll get the most accurate measurement results, giving you the true view of the cabling system's performance. Adding the Channel/Traffic Adapter extends your diagnostics and troubleshooting capabilities all in one tester.

Expanded on-board memory stores full day's results

Left your memory card at the office? Don't worry, the DSP-4300 has 16 MB of built-in internal memory, so you can test and save up to 300 full graphical test results to 350 MHz. Insert a 32 MB memory card and extend this to 600 results. Using the removable multimedia card allows you to keep the DSP on site. Take the memory card back to the office or mail the card to your customer.

Accurate cable ID download saves time

No more clumsy and time-consuming text-entry to enter cable IDs into the DSP. Just download the cable IDs from any application that can generate a text file: for example, a labeling software, a database manager, a spreadsheet, LinkWare™ Software, or a third-party infrastructure management package. Downloading the cable IDs in advance saves time in the field by eliminating the need to manually enter cable IDs into the tester. It also saves time in the office by ensuring that test result IDs match exactly the cable IDs in the company's infrastructure management or labeling software.

Upgrade your DSP-4000 Series Digital CableAnalyzer

See ordering information for upgrade options for your DSP-4000 or DSP-4100.

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Printed in U.S.A. 10/2003 1626542 A-ENG-N Rev D

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NETWORKSUPERVISION™

DTX CableAnalyzer™ significantly reduces your total time to certify.

The new DTX CableAnalyzer™ Series from Fluke Networks is the testing platform for today – and tomorrow. This revolutionary new platform significantly reduces total time to certify by improving every aspect of the testing process. It all starts with a Cat 6 Autotest time that's three times faster than other testers – and fiber testing that's five times faster. But that's just the beginning. DTX also gives you Level IV Accuracy, unmatched troubleshooting diagnostics, 900 MHz of testing bandwidth, 12-hour battery life, and nearly instant setup and reporting. With the DTX, you're ready for whatever the world throws at you – today and tomorrow.

DTX CableAnalyzer™

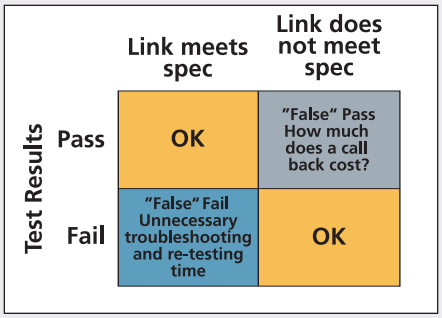
It's all about time.

900 MHz frequency for a future-proof investment

The top-of-the-line DTX CableAnalyzer – the DTX-1800 – supports testing up to 900 MHz. This extended bandwidth supports the ISO Class F links, as well as emerging standards like 10 Gigabit Ethernet over twisted-pair cabling. It also enables you to certify links for other applications, such as video distribution over twisted-pair cabling. No other tester on the market gives you this kind of future-proof investment while meeting current Cat 5e/6 specifications.

Accuracy every time, over time

The DTX Series testers are more accurate than any cable certification tester on the market today. Overall accuracy is a function of two critical factors: tester accuracy level – which assures that the tester delivers the correct PASS/FAIL results – and Permanent Link adapter technology, which is also a function of the quality and characteristics of the test adapters that interface to the link-under-test.



The cost of inaccuracy: *A tester showing incorrect Pass/Fail decision may cause a good link to fail (false fail) or a bad link to pass (false pass). Both of these false results cost you time and money.*

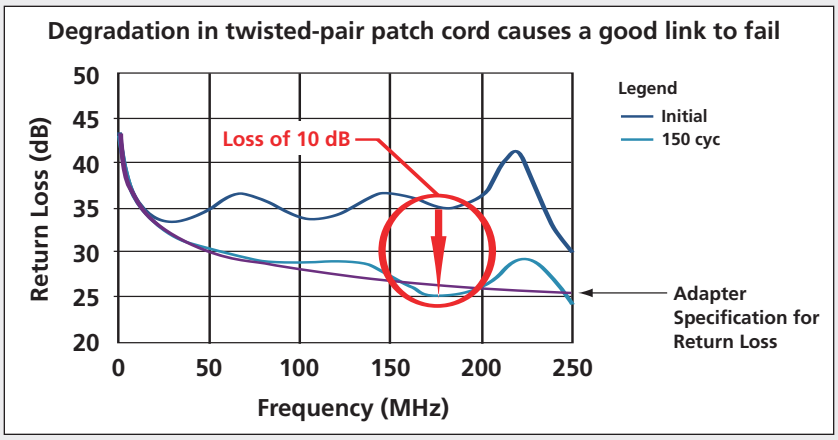
Tester accuracy exceeds Level IV

Until now, testers have been designed to meet accuracy Level III. The more demanding accuracy Level IV specification has been proposed in ISO/IEC (international standards) to test Class F links to 600 MHz. DTX testers exceed this new specification, assuring you of higher confidence in results over the full frequency range.

Permanent Link adapter technology eliminates false failures

Commercial patch cords – including Cat 5e/6 and Cat 7 – used in Permanent Link testing applications can cause costly false failures by failing a good link and adding unnecessary hours of troubleshooting and repeat testing. The daily wear associated with coiling, uncoiling, and storing patch cords under rough field conditions causes invisible degradation over time and contributes to Return Loss, which is often the cause of a FAIL.

At Fluke Networks, we put accuracy first. That's why we developed high-performance Permanent Link Adapters instead of using commercial patch cords. Our proprietary technology ensures superior accuracy and stability required for measuring Return Loss, while increasing the accuracy of all other measured test parameters – **not just accuracy one time, but accuracy every time – over time.**



As you can see in this graph, a commercial Cat 7 SSTP cord has a 10 dB loss after 150 cycles of coiling and uncoiling. This 10 dB degradation causes a good link to fail – and you end up with a false fail. This 10 dB of loss won't occur when you use Fluke Networks' Permanent Link adapter technology – with DTX you get repeatable accuracy you can count on.

FLUKE networks

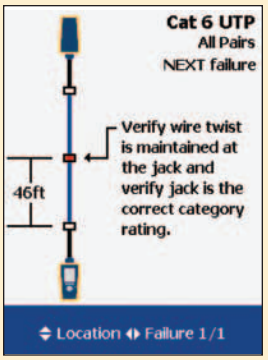
The DTX advantage: speed and accuracy.

The DTX CableAnalyzer's powerful features, speed, and superior accuracy make your crews more efficient and productive – and you can see the results on the bottom line. It's all about time – and no other tester delivers like DTX.

- **Increase productivity from day one.** Intuitive interface means your techs spend less time in training and more time testing.
- **Zero to certified in 9 seconds.** This unheard-of Cat 6 test speed lets you move from link to link three times faster than with previous testers.
- **Level IV Accuracy.** Get the most accurate test results in the shortest possible time.
- **900 MHz frequency range.** Prepares you for future applications, such as 10 Gigabit Ethernet, Class F and CATV.
- **Advanced time-saving diagnostics.** Pinpoints the location of a failure and is the only tester that suggests corrective action, saving trouble-shooting time.
- **Record-fast fiber certification.** Certifies a pair of fibers in 12 seconds with DTX singlemode and multimode fiber modules.
- **12-hour battery life.** Gives you the power to complete any job.
- **Save time managing results.** From setup to reporting, LinkWare™ Cable Test Management Software's simple user interface and time-saving features increase productivity.

Significantly reduces total time to certify.

The DTX Digital CableAnalyzer Series gives you a complete solution that streamlines every aspect of the certification job – from setup, to record-fast testing and troubleshooting, to reporting results to the customer. All told, DTX can save you considerable time and money – up to four hours a day.


Cat 6 UTP
All Pairs
NEXT failure
Verify wire twist is maintained at the jack and verify jack is the correct category rating.
46ft
Location Failure 1/1

Cat 6 certification in 9 seconds

The DTX-1200 and DTX-1800 perform Cat 6 certification tests in just 9 seconds – in full compliance with industry standards and with superior accuracy. That's *three times faster* than existing testers. This incredible speed means you can test up to 170 more links in an eight-hour shift.

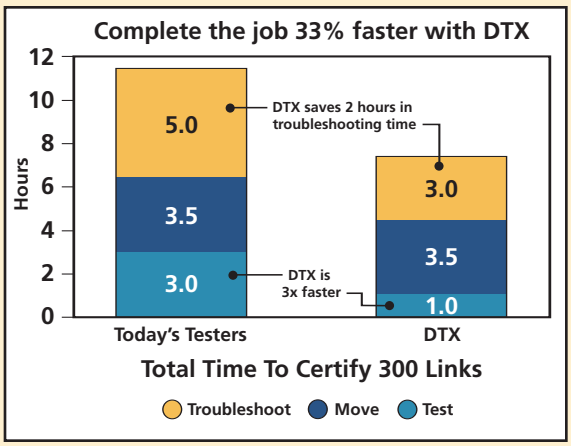
Troubleshoot faults twice as fast

When a link fails, the DTX Series provides quick, easy-to-understand directions to identify the point of failure (distance from the tester) and the possible reason(s) for the failure.

These directions not only tell you the problem, but also *identify corrective actions* your test technicians can take to solve the problem quickly – all without having to consult the project manager. Instead of spending time executing trial and error corrections – and re-testing to find out whether the problem has been resolved – the technician knows exactly where to look and what to do to fix the failing link. *Even if only two percent of the cables certified in one shift fail Autotest, you'll save as much as two hours of labor time per day of certifying.*

Fast even when you're not testing

The DTX Series isn't just a faster way to test. It cuts setup and reporting times. Its ease-of-use lowers training time. Extended battery life means you can do more on a single charge. And a bright color display, ample memory, and built-in talk set all contribute to overall productivity while enhancing the user experience. **This all adds up to save you time and money every day.**



The DTX CableAnalzyer: a visionary approach to testing.

Level IV Accuracy – Exceeds spec requirements for Cat 6 and beyond.

Fiber ready at all times – optional fiber modules fit snug and protected in DTX module cavity.

Advanced time-saving diagnostics pinpoint problems anywhere on the link and suggest corrective action to help you get the job done on time.

Field tough Permanent Link Adapter delivers repeatable accuracy and Cat 6 interoperability.

12-hour battery life – Lithium ion battery provides full day of testing.

Internal memory stores up to 250 graphical Cat 6 test results or up to 2000 reports in text format.

Memory Card for instant data hand-off – each multiple of 32 MB stores 600 Cat 6 graphical link test results.

Talk feature saves time by allowing you to communicate with your test partner at the other end of the link over both copper and fiber.

Rugged overmold bonded to case stands up to tough field conditions.

Bandwidth support to 900 MHz – supports video distribution, Class F, and 10 Gigabit Ethernet.

9-second Cat 6 Autotest – speeds you through testing three times faster than any other tester.

Large color display with bright backlight for easy viewing.

12-second fiber Autotest – performs dual fiber, dual-wavelength certification test.

Save full graphical test results to Fluke Networks' LinkWare PC software.

USB Port for high-speed test data downloads.

Portable, lightweight ergonomic design for easy field use.

Rotary knob makes learning easy and operation simple – you always know what test mode is selected.

Now you can test Gigabit Ethernet fiber links with the new DTX Gigabit Multimode Fiber Adapter.

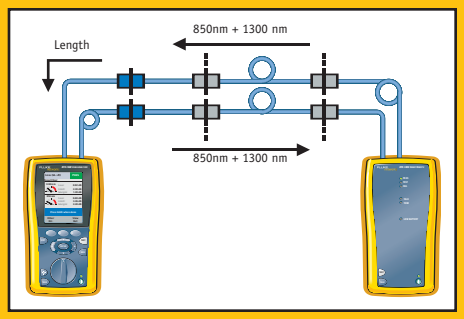
New DTX Patch Cord Test Adapters - a fast, simple way to ensure patch cords meet the performance requirements of the installed link.

Extend the capabilities of your DTX CableAnalyzer to test coaxial cabling systems with the new DTX Coax Test Adapters.

Get more done in less time with fiber on-board.

Record-fast fiber certification

The DTX fiber modules accelerate testing through exclusive technology and an easy-to-use interface. Press the Autotest button and you get standards compliant certification automatically – test two fibers, each at two wavelengths, measure length, and determine the pass or fail status – all in about 12 seconds. Our fiber modules let you test more fibers in less time, cutting testing costs and freeing you up for other tasks. You can easily save more than 100 hours per year.



*Unlike competitive fiber adapters which measure length and **two** loss measurements per Autotest, DTX is the only fiber test solution that measures length and **four** loss measurements per Autotest – all in about 12 seconds. With DTX Fiber Modules you can speed through fiber testing five times faster than the competition.*

Test copper and fiber with a touch of a button

Only the DTX platform offers optional on-board fiber modules – so you'll never lose time searching for your fiber adapter. And fiber certification is always ready when you are. No other solution lets you switch between copper and fiber with a touch of a button.

Certify multimode and singlemode fiber

DTX fiber modules use LED and laser sources to ensure standards-compliant certification. Save, upload, manage, and print comprehensive certification reports using LinkWare PC software.

Deliver complete Tier 1 certification

Our comprehensive Tier 1 certification solution includes loss, length, and polarity measurements. You can validate fiber link performance and installation quality. Measure optical loss at multiple wavelengths. Measure fiber length and verify polarity. And bi-directionally test fibers at two wavelengths without swapping near and far-end units.

Find faults faster

An integrated on-module visual fault locator (VFL) makes troubleshooting simple link problems fast and incredibly easy. The bright laser-driven VFL helps you locate many near-end fiber faults and can be used to verify continuity and polarity. Our exclusive integrated design ensures that the VFL is always on-hand when you need it.

DTX copper/fiber kits available

If you certify twisted pair copper and fiber optic cabling, we have a kit for you. These kits bundle a DTX Cable Analyzer set with DTX Fiber Modules so you have what you need to certify both copper and fiber media.

FLUKE networks

Time is money. DTX saves you both.

The DTX CableAnalyzer Series delivers superior performance that can reduce your total certification costs by as much as 33% per year. This dramatic reduction is the result of not just faster testing, but also improved accuracy, superior diagnostics, longer battery life, simple user interface, and fast setup and reporting.

DTX – it's all about time.

DTX CableAnalyzer Series

Product Features	DTX-1800	DTX-1200	DTX-LT
Cat 6 Autotest time (seconds)	9	9	30
Maximum bandwidth (MHz)	900	350	350
Accuracy level	IV	IV	IV
Color display	•	•	•
Stores graphical results data	•	•	•
Internal memory capacity (graphical Cat 6)	250	250	250
Removable memory card interface Cat 6 graphical results for each of 32 MB multiple	600	600	n/a
Lithium ion batteries – battery life	12 hours	12 hours	12 hours
Advanced diagnostics	•	•	•
USB interface	•	•	•
Serial interface	•	•	n/a
Cat 6 permanent link adapter	•	•	•
Cat 6 channel adapter	•	•	option
Accepts resident fiber module	•	•	•
Start autotest at smart remote	•	•	•
Talk between main and smart remote	•	•	•
Standard Accessories			
Fiber Test Module (multimode, singlemode, or gigabit multimode)	option	option	option
Class F permanent link adapter	option	n/a	n/a
Class F channel adapter	option	n/a	n/a
Coax Cable Test Adapters	option	option	option
Patch Cord Test Adapters	option	option	option
Multimedia memory card	•	option	n/a
USB cable	•	•	•
Serial computer interface cable	•	option	n/a
Talk headset	•	•	option
Carrying case	•	•	•

Note:
- **•** Feature or accessory is available in the standard product configuration.
- **n/a** The feature is not available; the accessory is not applicable.
- **option** The accessory can be purchased as an optional item.

The DTX Series future-proofs your investment giving you a clear and simple upgrade path from any of the models to any higher performance model, including the DTX-1800.

Enhance your DTX tester with service, support, and training.

Register your DTX and receive a bonus gift. Plus access to our Technical Assistance Center (TAC) and extensive on-line Knowledge Base for fast answers. Register today at **www.flukenetworks.com/register**

Customer Support is easy with our NetworkSuperVision™ Gold Support. It ensures peace-of-mind with free annual calibration, free loaner units, 24/7 TAC support and special discounts on training and promotions. See **www.flukenetworks.com/goldsupport** for more information. Or contact your country sales organization for Gold program availability and pricing.

Train your installers at our one-day CCTT training and certification program. This BICSI-accredited course includes classroom training, hands-on labs, and exam certification exercises. Visit **www.flukenteworks.com/CCTT** for more information. Or contact the country sales organization nearest you for availability.

Experience the power of DTX.

We invite you to experience the unique capabilities of our DTX CableAnalyzer by taking a virtual test drive at **www.flukenetworks.com/DTXlive**.

Or in the U.S. and Canada, call us at **1-800-508-0490** and let a Fluke Networks Systems Engineer show you how DTX technology can work for you. Other countries, visit **www.flukenetworks.com/contact** for a sales organization near you. You can also sign up for a free half-day workshop covering the latest in testing and standards overview, DTX product demonstration, and hands-on operation. To find a workshop in your area, go to **www.flukenetworks.com/workshops.**

The DTX Series from Fluke Networks. The revolutionary platform that significantly reduces total time to certify – today and tomorrow.

NETWORKSUPERVISION

Fluke Networks
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Fluke Networks operates in more than 50 countries worldwide. To find your local office contact details, go to www.flukenetworks.com/contact.

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FLUKE networks

IntelliTone™ Toner and Probe Series

Every day, cabling installers and network technicians deal with the shortcomings of cable location tools based on 40-year-old analog technology. Even though analog tools mis-identify cable and fail to pick up signals in of the most common workplace situations, they've been the only option out there. ***Until now.***

The ***IntelliTone™ Toner and Probe Series*** *from Fluke Networks gives you digital signal locating technology that's as advanced as the systems you work with. IntelliTone is a breakthrough solution – and the only solution – that locates and isolates the most elusive, hidden or bundled voice, data and video cables quickly and reliably – even on active networks. It succeeds where analog technology fails – such as locating cable in a bundle due to signal bleed, finding a cable even when plugged into active network equipment and differentiating the tone from noise or a false signal. With gains in speed, precision and productivity that make analog tools obsolete.*

IntelliTone breakthrough digital signaling

Only IntelliTone Toners and Probes bring the performance breakthrough of digital signal technology to common problems that come up in installing, maintaining, changing and troubleshooting your network.

- Eliminates confusion over cable location; decisively rejects noise and false signals
- Locates cable quickly from a distance, even on an active network
- Isolates cable and wiring precisely from a bundle, despite cable bleed
- Validates twisted-pair installation with visual end-to-end cablemap (opens, shorts and reversed pairs)
- Identifies, diagnoses and troubleshoots telecom/datacom services
- Simplifies signal interpretation in noisy environments with smart audio and LED signal indicators
- Safely and effectively tones active networks
- Tests phone lines with powerful Talk Battery
- Extended battery life with auto-power Off
- Compatible with analog toner and probes
- One-year warranty

Locate cables quickly and easily

Fluke Networks engineering has applied decades of cable testing expertise to the science of locating copper cables. The result is what we call IntelliTone technology – a smart digital signal-toning and signal-interpreting process that rapidly and precisely zeroes in on even the most elusive cables.

Simply attach the IntelliTone Toner to a cable and set the sensing mode on the IntelliTone Probe. IntelliTone technology energizes cable conductors with a smart, sychronized digital signal. Multiple tone types occur in the signal that help you to:

- LOCATE a cable from a distance using maximum radiation.
- ISOLATE a cable from a bundle using a signal with minimum radiation.
- VALIDATE cable conductor continuity with an automated signal that steps through each conductor.

The IntelliTone Probe's signal selection thumbwheel lets you choose which tone type to use. Controlled LED signal indicators and audio tones simplify signal interpretation and take the guesswork out of cable location, reducing even the toughest locating problems into a few minutes' work.

Locate hidden cables from a distance

One of the toughest, most time-consuming parts of locating a cable has been in tracing its path through walls, ceilings or wiring closets. The IntelliTone smart digital signal features a LOCATE tone that provides maximum radiation, allowing you to quickly locate hidden and hard-to-find cabling from a distance.

Isolate the right cable – fast

Cabling installations have become increasingly complex, which has made cabling increasingly difficult to locate with analog technology. Cables from individual wall jacks or devices are often brought together and run in bundles to a central area or panel. When cables are run together for even short lengths, a signal from one can bleed over to another. One cable might carry the original signal; other cables might carry the signal as a result of bleed. Isolating cables with analog tools requires guesswork, training, time for repeated testing – and even the best efforts often result in mistakes.

The IntelliTone Toner uses the unique properties of twisted pair cabling to create a signal that minimizes the effect of bleed. The smart digital signal processing in the IntelliTone Probe clearly identifies this signal with audio and LED visual indicators, allowing you to rapidly isolate the correct cable from a bundle or on a patch panel. IntelliTone eliminates hours of cable confusion – so you can get it right the first time.

Overcome noise – and save hours of time

Fluorescent lights, machinery, computer monitors and electrical wiring all produce noise that slows down cable location or makes it simply impossible with standard analog audio toners and probes. Together, the IntelliTone Toner's synchronized digital signal and the IntelliTone Probe's microprocessor controlled signal identification technology reject noise and false signals to clearly identify cable location. This advanced capability alone can save you hours every week on cable location projects.

Tone on live networks quickly and safely

Modern network devices use common mode termination for cables connected to their ports. While this termination reduces noise and crosstalk in the cable, it can also absorb an analog toner signal, making the connected cable impossible to detect. The result is that locating an unlabeled network can take hours with analog technology. Unlike analog signals, the IntelliTone digital signal stays strong despite common mode termination. And the IntelliTone Toner automates toning individual cable conductors, making it quick, efficient and safe to locate cables on active networks.

Validate conductor continuity with cablemap

Eliminate callbacks during cabling moves, adds and changes with the powerful diagnostic capabilities of IntelliTone™. The IntelliTone 200 Probe features a CABLEMAP capability that identifies common cable miswires in twisted pair cabling. IntelliTone technology automates the testing of each conductor for end-to-end continuity; LED lights and tones clearly indicate miswires.

Identify and troubleshoot cable services

Continuity – Once you've located a cable, the next step is to validate cable conductor continuity. IntelliTone 100 and 200 Series Toners make it easy – eliminating the need for a separate diagnostic tool.

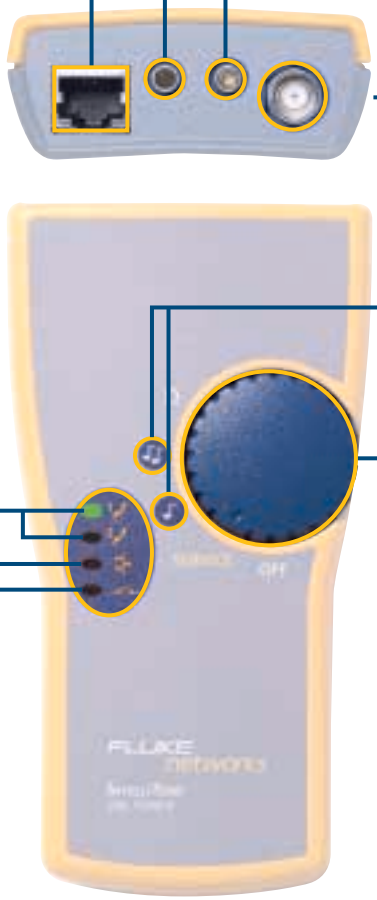
Service – Is the RJ45 jack a datacom jack, a phone jack – or a dead jack? IntelliTone 200 Toners take the guesswork out of hunting for an active jack, or a jack with the right service. LEDs clearly identify common services found on today's networks, including telecom and datacom services and 10/100/1Gb Ethernet links.

Telecom troubleshooting – Detect Line 1 voltage, polarity, and ring with IntelliTone 100 and 200 Toners. The IntelliTone 200 Toner adds Line 2 troubleshooting. Confirm telecom circuits with the built-in talk battery capability.

IntelliTone provides robust toning into active network equipment while eliminating cable mis-identification due to bleed

Banana jacks allow customer selection and replacement of leads or no leads

One tool supports all VDV cable types (RJ45, RJ11, coax, and bare wire



Choose between **one-note or two-note tones**

Knob provides **simple, task oriented operation**

Identify and diagnose POTS with multi-line Telco detect, polarity and ring indication (Line 1 and Line 2)

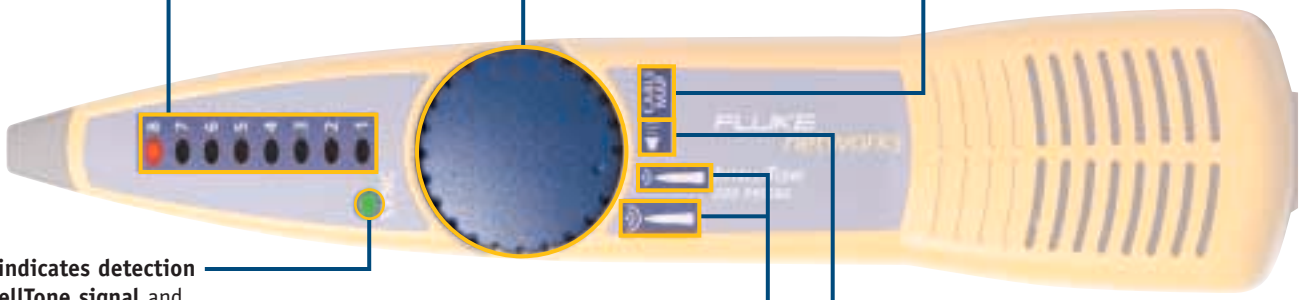
Identify and diagnose Ethernet link connectivity with NIC/hub indication

Test cable continuity, eliminating need for separate diagnostic tool

Multiple-level LEDs simplify signal interpretation in noisy environments

Time-saving thumbwheel lets you select desired toning mode on the probe rather than toner

Test cable continuity – eliminating need for separate diagnostic tool



SYNC indicates detection of IntellTone signal and shows battery status at power-up

Choose between two digital toning signals:

– lets you locate cables at a distance

– lets you isolate cables in bundles or at patch panels

IntelliTone probes sense legacy analog signals for **full backwards compatibility**

Shared features:

IntelliTone digital technology with advanced signal processing provides **high-resolution measurement**

Auto-Off feature: The toner turns off automatically after 2.5 hours of inactivity. Probe turns off after 1 hour of inactivity.

Low battery indicator: LEDs on the toner and probe light for one second at power on to indicate the battery status

Analog toner/probe compatible – IntelliTone Toners generate 1 KHz compatible legacy analog tones that analog audio probes can detect; and IntelliTone Probes sense legacy analog signals for full backwards compatibility

Specifications

General	Operating temperature*	32 °F to 104 °F (0 °C to 40 °C)
	Storage temperature	-4 °F to +140 °F (-20 °C to +60 °C)
	Operating relative humidity (% RH w/o condensation)	95 % (50 °F to 95 °F; 10 °C to 35 °C) 75 % (95 °F to 104 °F; 35 °C to 40 °C) Uncontrolled < 50 °F (< 10 °C)
	Vibration	Random, 2 g, 5 Hz-500 Hz
	Shock	1 m drop test with and without module
	Safety	EN 61010-1 1st Edition + Amendments 1, 2
	Altitude	3000 m
	EMC	EN 61326-1
	Battery type and life	9 V alkaline (NEDA 1604A or IEC 6LR61); 20 hours typical
	Applications	Copper cabling media, including shielded (STP) and UTP cable; 75 or 50 Ohm coaxial cable; two conductor control, security, generic cabling. 10 Base-T or 10/100 Base-T datacom networks. POTS telecom service
	Legacy Tone	Create and detect 1000 Hz compatible tone
Toner	Dimensions	5.54 in x 2.94 in x 1.25 in (14.1 cm x 7.5 cm x 3.2 cm)
	Display	LED
	Control	Thumbwheel switch
	Toner interface	Main Mod8 port for tone generation on all 4 pairs of UTP / STP cabling F connector for coaxial cabling Banana jack plugs (2) - two conductor wiring
	Toner frequency	IntelliTone signal: encoded digital signal
	Talk battery voltage	6 V into 600 W
	Output power	5 V p-p
	Voltage protection	100 V
	Auto power down	Turns off automatically after 2.5 hours of inactivity
Probe	Dimensions	8.73 in x 1.88 in x 1.26 in (22.2 cm x 4.8 cm x 3.2 cm)
	Display	(8) LED indicators, Synch LED indicator
	Audio	Microprocessor controlled audio files
	Control	Thumbwheel switch, volume control wheel
	Tone detection	Detects IntelliTone digital signal and 1 kHz signal from analog toners
	Toner interface	Main Mod8 port for cablemap on all four pairs of UTP / STP cabling
	Auto power down	Turns off automatically after one hour of inactivity

Optional Carrying Case
MT-8202-05

Optional test leads
with bed of nails
MT-8203-20

Optional test leads
with alligator clips
MT-8203-22

Ordering Information

Model Number	Items Included
MT-8200-60A	**IntelliTone 200 Kit** Includes IntelliTone 200 Toner and 200 Probe, coax F connector adapter, (2) RJ11 and (2) RJ45 patch cables, test leads with alligator clips, lanyards, owners CD and quick start guide, (2) 9 volt batteries
MT-8200-50A	**IntelliTone 100 Kit** Includes IntelliTone 100 Toner and 100 Probe, coax F connector adapter, RJ11 and RJ45 patch cables, test leads with alligator clips, lanyards, owners CD and quick start guide, (2) 9 volt batteries
MT-8200-61A	**IntelliTone 200 Toner** Includes IntelliTone 200 Toner, coax F connector adapter, RJ11 and RJ45 patch cables, test leads with alligator clips, lanyard, owners CD and quick start guide, 9 volt battery
MT-8200-51A	**IntelliTone 100 Toner** Includes IntelliTone 100 Toner, coax F connector adapter, RJ11 and RJ45 patch cables, test leads with alligator clips, lanyard, owners CD and quick start guide, 9 volt battery
MT-8200-63A	**IntelliTone 200 Probe** Includes IntelliTone 200 Probe, RJ11 and RJ45 patch cables, lanyard, owners CD and quick start guide, 9 volt battery
MT-8200-53A	**IntelliTone 100 Probe** Includes IntelliTone 100 Probe, lanyard, owners CD and quick start guide, 9 volt battery
IntelliTone Toner and Probe Accessories	
MT-8202-05	**IntelliTone Case** Includes heavy-duty pack cloth padded and lined case with belt loops and d-ring
MT-8203-20	**Test Leads with Bed of Nails** Includes set of two banana jack test leads with piercing pin “Bed of Nails” alligator clips with vinyl sleeves
MT-8203-22	**Test Leads with Alligator Clips** Includes set of two banana jack test leads with standard alligator clips with vinyl sleeves

Get superior performance – and a money-back guarantee

If, within 30 days after purchase, you are dissatisfied in any way with the IntelliTone Toner and Probe Kit (MT-8200-50A, MT-8200-60A), just return it to Fluke Networks with a copy of the sales receipt for refund of the purchase price.*

** Visit* **www.flukenetworks.com/itguarantee** *for more information. Refund does not include return postage or duties.*

Fluke Networks delivers Network SuperVision

Fluke Networks offers the most comprehensive line of premises network testing tools for the inspection, verification, certification, and documentation of copper and fiber optic cabling systems. Network owners, installers and maintainers alike choose our products because they provide superior vision into their networks. From products that stay ahead of your technology needs, to responsive service to keep you up and running, Fluke Networks has everything you need to keep pace in today’s fast moving networked world.

NETWORKSUPERVISION

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Fluke Networks operates in more than 50 countries worldwide. To find your local office contact details, go to **www.flukenetworks.com/contact**.

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Printed in U.S.A. 1/2004 2113101 D-ENG-N Rev A

FLUKE networks

LinkRunner™ Network Multimeter

Frontline PC and network technicians are the first line of defense against problems at the physical and link layers of the network. Typical problems the technician checks for include determining whether the drop is active, whether they can "ping" other network resources, finding any cable problems and tracing the cable path.

Designed for the frontline technician, LinkRunner improves troubleshooting and escalation accuracy by helping to quickly identify if a problem is in the network or the PC NIC. LinkRunner performs essential tests for troubleshooting and solving problems in the physical and link layers, the source of 80% of network problems.

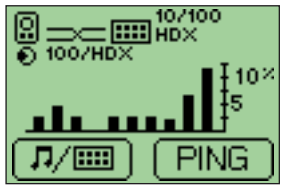
Instant vision into the network drop. That's Network SuperVision.™ That's Fluke Networks' promise to you.

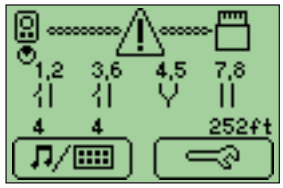
Perform the following tests quickly

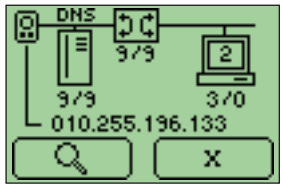
Link – determine whether the drop is active, identify its speed, duplex capabilities, and service type (e.g., Ethernet, Token ring, Telco). Users can then reconfigure these settings on the hub or NIC as needed.

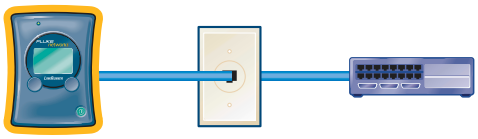
Length – determine whether the cable length is within specifications, what type it is (straight or crossover), and whether it has any faults. These tests, which work for both structured and patch cables, eliminate the need for a separate cable tester.

Ping – verify connectivity to key network resources and determine whether a PC NIC is responding.









Drop Switch

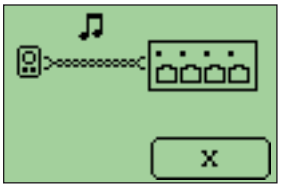
Actual size.

LinkRunner helps you answer questions like:

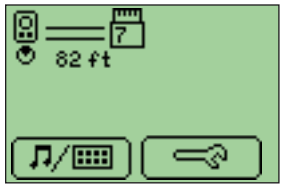
- Is this an active Ethernet port?
- What speed/duplex is the hub/switch/PC NIC configured for?
- Am I seeing traffic from this connection?
- Is the PC NIC okay?
- Where does the cable go?
- Am I connected to the Internet?

Quickly verify and troubleshoot network drops with this essential, personal tool.

Link pulse – blink the hub port or PC light while sending tone for cable location. Use the optional Microprobe to hear the audible tone being sent by LinkRunner.



Cable ID – identify unknown cabling paths using the optional Cable ID by seeing which numbered plug is on the other end of the wire.



Ordering Information

Model Name	Description
LINKRUNNER	LinkRunner Network Multimeter
LINKRUNNER-KIT	LinkRunner Extended Test Kit (Includes LinkRunner and all accessories listed below including custom carrying case)
CABLE ID KIT	Cable ID Kit (numbers 1-8)
LRUN-WM	Wiremap Adapter
RJ-45 COUPLER	RJ-45 Coupler
MT-8200-46	MicroProbe Tone Receiver Probe
CLIP SET	Clip adapter to test unterminated cables
BATT-AA-NIMH	NiMH Battery Pack
NT-BATT-CHG	NiMH Battery Charger
LR-CASE	Custom Carrying Case for LinkRunner Extended Test Kit
PC-INSP	PC Inspector

Specifications

Media access	10BASE-T and 100BASE-TX
Identifies	10BASE-T, 100BASE-TX (full or half-duplex), Token Ring, Telco, Cable ID, un-powered PC or hub, Auto-MDIX ports and Auto-Negotiation or strapped port
Cable tests	Length, open, short, splits, wiremap, crossed, straight through
Ports	RJ-45 LAN, RJ-45 Wiremap
Interface	Push button navigation of icon/menu driven view
Power	2 AA batteries standard. Optional NiMH batteries and battery charger available. Approximately 20 hours continuous use with 4 hours of pinging.
Dimensions	2.75"w x 3.75"h x 1.25"d (6.98cm x 9.52cm x 3.17cm)
Weight	4.5 oz/128 grams with batteries installed
Warranty	One year

LinkRunner Standard Kit Contents

- LinkRunner Network Multimeter
- Wiremap Adapter
- Quick Reference User Guide
- 2 AA alkaline batteries

LinkRunner Extended Test Kit Includes:

All available accessories and the custom carrying case

FREE Belt clip holster when you register your LinkRunner

Visit www.flukenetworks.com/linkrunner for more information and to explore the online virtual demo.

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LinkRunner™ Pro Network Multimeter

Detect a broader range of today's connectivity problems

Network technicians and desktop support professionals are the first line of defense against problems at the physical and link layers of the network. They are tasked with resolving basic connectivity problems fast, and preventing unnecessary escalations to higher levels.

Today's connectivity problems are more complex than ever. Users demand Gigabit connectivity. IT departments enforce stronger standards like 802.1X. And technologies like VoIP and WLAN have given rise to a greater reliance on PoE for power.

LinkRunner Pro recognizes this, and empowers technicians to address today's challenges with powerful new features and reporting capabilities. And, following the tradition of the original LinkRunner, it is designed for simplicity and ease-of-use to ensure rapid deployment and concise answers.

Vision to resolve a broader range of today's link connectivity problems. That's Network SuperVision.™ That's Fluke Networks' promise to you.

Count on LinkRunner Pro for answers

- Can I negotiate at Gigabit?
- Are there 802.1X security conflicts?
- Is the DHCP server responding?
- Do I have PoE voltage on the right pairs?
- Can I link with key devices or the Internet?
- Which port number am I plugged into?

Empower techs to troubleshoot gig links

LinkRunner Pro is the first frontline tool to establish links at Gigabit speeds. That means frontline technicians now have the power to troubleshoot Gigabit link problems before they're escalated to higher levels, giving network engineers more time to focus on optimization, planning, and expansion.

Quickly resolve 802.1X security conflicts

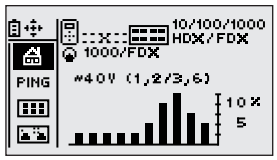
LinkRunner Pro not only will discover the presence of 802.1X, but can also gain authentication on 802.1X networks. The included LinkRunner Connect Software can be used to select EAP type, provide certificates, and enter passwords. Technicians can now resolve 802.1X conflicts and get users back up and running fast.

Eliminate guesswork over port locations

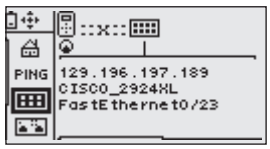
LinkRunner Pro is the first connectivity tool to support the new IEEE Link Layer Discovery Protocol (LLDP) in addition to the Cisco and Extreme Discovery Protocols (CDP and EDP). That allows technicians to speed problem resolution by precisely locating the nearest switch model, slot, and port.

Document problems with link status reports

When no test documentation is available, closing trouble tickets can be a frustrating and time-consuming process. Finger pointing and redundant testing are just a couple of the wastes that occur. LinkRunner Pro eliminates these wastes by generating objective, professional test reports that can be printed or routed electronically.



See device capabilities, link speed, PoE power, and utilization levels.



Precisely locate switch ports with CDP, EDP, and LLDP discovery.

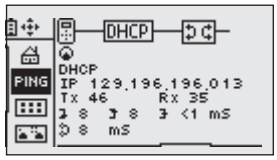
Detects a broader range of today's connectivity problems.

Ordering information

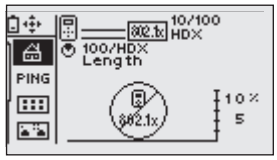
Model Number	Description
LRPRO-1000	LinkRunner Pro Network Multimeter
LRPRO-KIT	LinkRunner Pro Extended Test Kit (see image below for contents)
CIQ-GSV	CableIQ Gigabit Service Kit (see image below for contents)
Accessories	**Description**
WIREVIEW 2-6	WireView Cable IDs #2-6
CLIP-SET	RJ45 to 8-clip test lead
CIQ-RJA	RJ45/11 Modular Adapter
MT-8200-63A	IntelliTone 200 Probe

Specifications

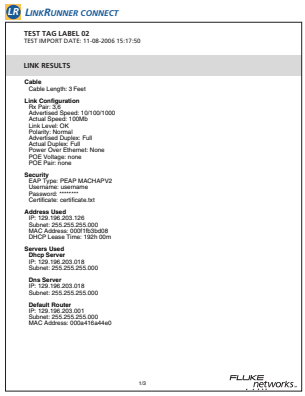
Media Access	10BASE-T, 100BASE-TX, 1000BASE-T (IEEE 802.3), and PoE (IEEE 802.3af)
Cable Tests	Pair lengths, opens, shorts, splits, crossed, straight through, and cable ID
Tone Generator	IntelliTone digital tone: [500 KHz]; analog tones: [400Hz, 1KHz]
Ports	Test ports: RJ45 ports; Application port: mini-USB
Power Source	4 AA batteries
Weight	10 oz (311 grams) with batteries installed
Dimensions	5.3" h x 3.1" w x 1.3" d (13.46cm x 7.87cm x 3.30cm)
LinkRunner Connect Software	Operates on Windows XP and 2000; supports English, Spanish, French, German, Simplified Chinese, and Japanese
Warranty	One year



Ping DNS server or other key devices, and observe response time.



Quickly authenticate and identify potential 802.1X security conflicts.



Expedite trouble ticket resolution by attaching link status reports.

LinkRunner Family Comparison

Features	LinkRunner	LinkRunner Pro
Link/Ping Speed	10/100	10/100/1000
POTS/ISDN/Ethernet Detection	•	•
Cable Wiremap	•	•
Discovery Protocols	CDP/EDP	CDP/EDP/LLDP
IntelliTone Digital Toning		•
PoE Verification		•
Configurable Ping List		10 IP Addresses
802.1X Authentication		•
Link Status Reports		•
USB Application Port		•
Protective Rubber Mold		•

LinkRunner Pro Network Multimeter

CableIQ Gigabit Service Kit

LinkRunner Pro Extended Test Kit

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FLUKE networks

Verify the Quality of Your Installation

Verification is the minimum indicator of installation quality for many cabling types, and plays an important role in the success of any Voice, Datacom, or Video (VDV) cabling installation. Whether you're performing new cabling installations or working with existing cabling infrastructure for moves, additions, or configuration changes, you can quickly verify your work with an affordable test tool and have confidence in a quality installation.

What is verification testing?

Verification testing confirms that a cable meets established national or international standards of conductor configuration and passes basic continuity testing. Verification may be performed on two conductors or multi-conductor twisted pair cabling. Look to Fluke Networks' MicroScanner Pro and MicroMapper to perform basic verification testing, as well as troubleshoot and solve wiring mistakes before they become real problems. Both award-winning products are backed by the superior support you've come to expect from Fluke Networks, the leader in network testing.

MicroScanner™ Pro

The essential cable verification tester

The MicroScanner™ Pro is a powerful verification tool designed to confirm basic installation quality of multiple cable types. It automates the testing of cable conductor continuity and configuration, and provides necessary information to rapidly solve problems including the location of cable faults. MicroScanner Pro tests coaxial cable (RG6, RG59, etc., for CATV/CCTV), twisted pair cable (UTP/STP/SSTP), and other wiring for audio, control, security or basic telephone service. The MicroScanner Pro speeds basic live network testing with powerful network tap service and speed identification.

Quickly identify problems

Use the MicroScanner Pro for verification to ensure basic continuity and correct terminations. The wiremap test checks end-to-end continuity on all UTP cable four-wire pairs to quickly verify if the cable under test has the correct wiring scheme (either 568A or 568B) and identifies any cabling problems. MicroScanner Pro quickly identifies a fault (see Figure 1), allowing you to see opens, shorts, crossed pairs, split pairs or any miswires.

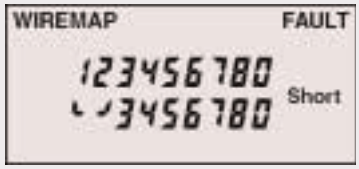


***Figure 1**. Pairs 1-2 are shorted.*

See how to ensure cable configuration quality with Fluke Networks verification tools

Troubleshooting tools save you time

What happens when a fault is detected? You waste valuable time with visual inspection or troubleshooting by process of elimination. With the push of a button, MicroScanner Pro's length function uses Time Domain Reflectometry (TDR). TDR acts like "cable radar" to measure the distance to an open or short in each conductor pair, or the overall length of the cable. TDR provides the critical information necessary to determine whether to repair punched down conductors at the block, replace a port or connector, or pull a new cable. Overall cable length measurement is useful for tracking cable usage for billing and inventory purposes.

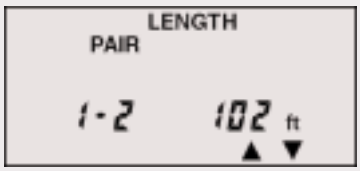


Figure 2. *Showing 1-2 pair length.*

TDR even identifies the distance to active network taps such as hubs or nic cards.

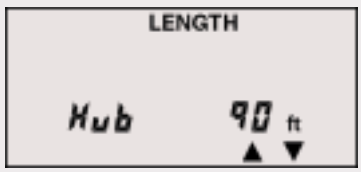


Figure 3. *Active network hub detected at 90 ft.*

Identify active network connections

MicroScanner Pro's active network identification mode flashes hub ports and shows you if a network tap is operating at 10 Mbps or 10/100 Mbps and whether it is full or half duplex capable. It also identifies workstation network interface cards.

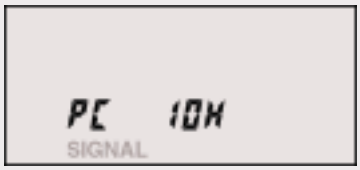


Figure 4. *10 Base-T signal detected, wired to PC.*

Tracing and locating cables

MicroScanner Pro's toner function allows you to generate a 1000 Hz tone detectable by standard analog probes to trace and locate hidden cabling in walls, ceilings or distribution boxes. Four unique selectable tones help identify different users toning at the same time.

Identify cabling links from the wiring closet

MicroScanner Pro Office/Room Identifier allows you to identify cabling drops for an office or room during adds, moves and changes, and it helps determine routing at the patch panel and documents twisted pair and coaxial cabling installations. Use the Office Identifier Plugs (shown below) to attach to the far end of the link (at the workstation/office) and the MicroScanner Pro will display the office number on the display (see Figure 5).

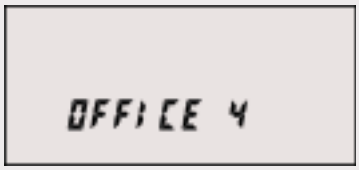


Figure 5. *Office/Room #4 termination ID.*

MicroScanner Pro features

- Tests all common copper cable types: bare wire, coaxial cabling, UTP and STP cabling
- Checks wire configuration (wiremap) to ANSI/TIA/EIA 568A, 568B standards
- Speeds identification and troubleshooting of common miswires such as opens, shorts, crossed and split pairs
- Uses patented TDR technology to ensure accurate pair length measurements
- Flashes hub light to help identify pairs
- Generates four unique tones for locating cables hidden in walls, ceilings, or wiring closets
- Identifies active networking 10 Base-T/ 100Base-T hubs
- Identifies half or full duplex capability
- Matches (UTP or coaxial) cables to offices during adds, moves and changes
- Enables patch cable testing without couplers or external adapters
- Comes with one-year warranty

MicroScanner Pro Accessories

Bare-wire Adapter (MT-8203-16)

Coax Adapter (MT-8203-15)

Wiremap Adapter (MT-8203-14)

Office Identifier Plugs (MT-8203-17)

Carrying Case (MT-8202-04)

FLUKE networks

MicroScanner² Cable Verifier

Raising cable verification to a higher power

For more than a decade, cabling installation and maintenance technicians have relied on MicroScanner to verify terminations and troubleshoot continuity faults. A lot has changed in the cabling world since the original MicroScanner was introduced. Industry economics require that installations be done fast and accurately with no callbacks. And converging voice, data, and video technologies have given rise to new requirements for service testing and multimedia support.

MicroScanner² recognizes these trends and presents a much-needed revolution to the way testing is done. It streamlines every aspect of the verification job. From its time-saving user interface and integrated multimedia support to its expanded service detection capabilities, MicroScanner² gives technicians the power to perform their jobs faster and more accurately than ever.

High power vision to verify voice/data/video cabling and services. That's Network SuperVision.™ That's Fluke Networks' promise to you.

Reduce test time and user error

Yesterday's cable verification testers force users to toggle between different modes (up to four) to view all test results. This not only slows the test process, but also causes user frustration and error. MicroScanner² has defied this convention by displaying key test results – wiremap, pair lengths, distance to fault, cable ID, and far-end devices – all on one screen.

Eliminate awkward test adapters

Tired of losing or breaking all the adapters needed for testing the various voice, data, and video media types? MicroScanner² makes these adapters things of the past with built-in RJ11, RJ45, and coax support. Both the main unit and the far-end identifiers can be used to test telephone jacks, Ethernet jacks, and CATV outlets right out of the box.

Rule out service problems fast

Today's communications technicians have more problems to deal with than just the cabling. They have to rule out a whole host of cable and service issues before determining the cause of a connectivity problem. Is there telephone voltage? What's the polarity? Is there a switch at the far end? Is PoE available? MicroScanner² gives technicians high power vision to verify today's most common voice, data, and video services.

Locate elusive cables in seconds

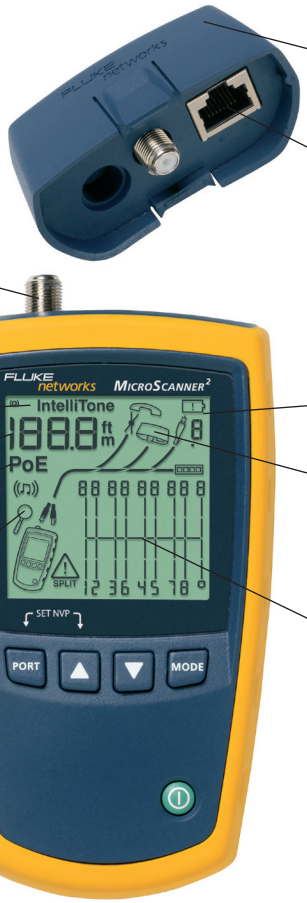
MicroScanner² features built-in IntelliTone digital and analog toning to precisely locate

virtually any cable or wire pair, regardless of work environment. Use digital mode to locate high-grade data cabling (Cat 5e/6/6a) in bundles, or at switches, patch panels, or wall outlets. Or, use analog mode on voice-grade cabling (Cat 3 and below), as well as coax, security/alarm, and speaker wiring.

Repair or replace tools less often

With all the abuse you put your tools through, you can't afford for them to be delicate. MicroScanner² features a rubber wrap-around holster that makes it the right tool for even the toughest jobs. Toss it into your toolbox. Drop it from a ladder. It can handle it. Plus, it now comes standard with a vinyl carry pouch for enhanced protection and convenience.

MicroScanner² Cable Verifier



Wiremap adapter doubles as protective cap

Modular port accepts RJ45 and RJ11 plugs

Coax connector for video and audio testing

Rubber holster enhances durability and grip

Digital toning is safe and effective on active networks

Length meter shows distance to termination, open, or short

PoE detection rules out insufficient power as source of problems

Detail mode gives additional test status information

Oversized LCD is backlit for crystal clear results

Intuitive icons show what's at the far end of any cable (10/100/1000 switch, POTS service, short, cable ID)

Graphical wiremap shows type and location of fault (miswires, reversals, split pairs, shorts, breaks)

Ordering Information

Model	Description
MS2-100	MicroScanner² Cable Verifier
MS2-KIT	MicroScanner² Professional Kit

Accessories	Description
MS2-IDK27	MicroScanner² Remote Identifier Kit #2-7
MT-8200-63A	IntelliTone Pro 200 Probe
CLIP-SET	RJ45 to 8 – Clip Test Lead
CIQ-RJA	RJ45/11 Modular Adapter
CIQ-COAX	Coax Adapter Kit for RCA, BNC
MS2-CPK	MicroScanner² Professional Kit Carry Case

Specifications and availability subject to change.

Specifications

Test Connectors	Twisted-pair: UTP, FTP, SSTP 8-pin modular jack accepts RJ45 and RJ11 Coax: F-connector for 75 Ω, 50 Ω, 93 Ω cables
Cable Tests	Length (460 m or 1500 ft), wiremap to TIA-568A/B standards, remote ID locators
Tone Generator	IntelliTone digital tone: [500 KHz]; analog tones: [400Hz, 1KHz]
PoE Detection	Solicits and detects the presence of 802.3af compatible PoE devices
Ethernet Port Test	Advertised speed of 802.3 Ethernet ports (10/100/1000)
Power Source	Battery type: 2 AA alkaline batteries
Dimensions	3 in x 6.4 in x 1.4 in (7.6 cm x 16.3 cm x 3.6 cm)
Weight	13 ounces; 363 grams (batteries included)
Warranty	One year

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Specifications

Product	Specs
MicroScanner Pro	**Dimensions:** 5.5" x 3.25" x 1" (139.7 x 82.5 x 25.4 mm)
	Battery: 9-volt alkaline battery; low battery indication
	Display: custom LCD, 1.75" x .85" (44.45 x 21.59 mm)
	Applications: shielded (STP) and UTP cable; 75 or 50 Ohm Coaxial cable; 10 Base-T or 10/100 Base-T networks
	Main tester interface: modular 8 connector for length, 10/100 link identification, wire map, office identifier, toner; loopback interface: module 8 connector used for patch cable wiremap
	Length measurement: measures length on all 4 pairs and displays in feet or meters; ±4% or ±2 ft whichever is greater, max length 1500 ft (457 m)
	Length calibration: user selectable NVP, NVP calculation based on known cable length (min. length 50 ft (15 m) and max. length 1500 ft (457 m)
	Wiremap and Office/Identifier: faults detected: opens, shorts, reversed pairs, swapped pairs, and split pairs, distance maximum length: 656 ft (200M)
	Office Identifier: 6 passive test plugs attached to far end (identified as #1-3 and #5-7); distance maximum length 656 ft (200 mm)
	Toner frequency: user may select 1 of 4 predefined tone sequences
	Toner Interface: main Mod8 port for tone generation on all 4 pairs. Ground jack provided for grounding MicroScanner Pro during trace operations.
	High voltage input/protection: the test interface withstands input hazard conditions that arise from normal telephone interfaces (48 VDC at less than 80 mA) or 24 VAC power used to power many telephone keysets.
Wiremap Adapter	**Dimensions:** 2.25" x .5" x .625" (57.15 x 12.7 x 15.875 mm)
Coax Adapter	**Dimensions:** 3" x .63" x .58" (76.2 x 16 x 14.7 mm)
MicroMapper	**Dimensions:** 4.93" x 2.05" x 1.18" (125 x 52 x 30 mm)
	Weight: 0.28 lbs (130 g)
	Minimum length for split pair detection: 2 ft (0.6 m)
	Maximum Testing length for twisted pair cables: 656 ft (200 m)
	Battery: (4) 1.5-volt AAA alkaline batteries; low battery indication by LED

Ordering Information

Model Number	Items Included
MT-8200-32A	**MicroScanner Pro** Includes: MicroScanner Pro, Wiremap Adapter (Office ID 4), Coax Adapter (CATV type, F-connector), 9-volt Alkaline battery, Quick Reference Guide, and User CD
MT-8200-24A	**MicroScanner Pro VDV Kit** Includes: MicroScanner Pro, IntelliTone Probe, wiremap adapter, coax adapter (CATV type, F-connector), office/room ID kit, 9-volt alkaline battery, Quick Reference Guide, and User CD
	MicroScanner Pro Accessories
MT-8202-04	MicroScanner Pro Carrying Case
MT-8203-15	Coax Adapter Replacement Part (RJ45 to F Connector)
MT-8203-17	Office/Room ID Kit (IDs 1 – 3, 5 – 7)
MT-8203-14	Wiremap Adapter Replacement Part (Office ID 4)
MT-8203-16	Bare Wire Adapter (with alligator clips)
MT-8200-49A	**MicroMapper** Includes: MicroMapper and MicroMapper Remote, RJ45 patch cable, (4) 1.5 Volt AAA alkaline batteries, Quick Reference Guide, and User CD

Fluke Networks delivers Network SuperVision

Fluke Networks offers the most comprehensive line of premises network testing tools for the inspection, verification, certification, and documentation of copper and fiber optic cabling systems. Network owners, installers and maintainers alike choose our products because they provide superior vision into their networks. From products that stay ahead of your technology needs, to responsive service to keep you up and running, Fluke Networks has everything you need to keep pace in today's fast moving networked world.

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FLUKE networks

NetTool™ Series II Inline Network Tester

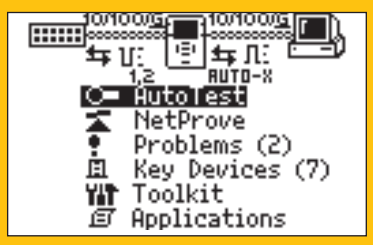
Email not responding? Who's to blame? Where to start? NetTool Series II redefines how to track down and isolate the source of connectivity problems while providing the vision you need to troubleshoot network devices.

The new Series II NetTool features NetProve™ diagnostics – this easy, one-button test proves if the network is to blame for a connectivity problem. In seconds, you can test connectivity to key devices and service ports enterprise-wide.

NetTool's inline vision provides a unique view into 10, 100 and Gigabit links to troubleshoot device problems fast. Verify compatible configurations of switches and PCs. Monitor the conversations between VoIP phones and the network, and measure call quality. Discover key devices, problems, VLANs and switch ports. Measure PoE line voltage and current and verify PoE pairs.

And if the problem is cable related, NetTool verifies wiremap and displays the distance to cabling faults. IntelliTone digital toning helps locate cables others can't, even when the cable is terminated at a switch.

All this in a handheld, portable tool built to take what you can dish out.

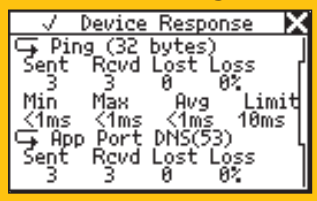


NetTool Series II features

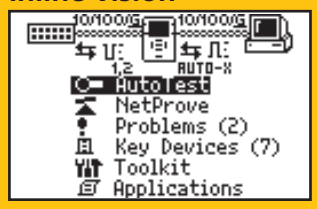
- **New! NetProve diagnostics** – isolate device and application connectivity issues in seconds
- **New! IntelliTone™ digital signalling** – quickly and safely locate cables on active networks, even when terminated at a switch
- **New! Inline Gigabit** – troubleshoot Gigabit-to-the-desk deployments with dual 10, 100, and 1000 Mbps Ethernet interfaces
- **New! PoE current measurement** – view PoE current, voltage and pair information either inline or single-ended
- **VoIP Option** – monitor IP phone boot-up and VoIP conversations and measure key call quality metrics
- **PC to network connectivity** – connect inline between two network devices and see common connectivity problems like speed and duplex mismatch, link problems, and errors
- **PC's network configuration** – review servers the PC is configured to use, with services offered, name, IP address and subnet
- **VLAN, CDP, EDP, LLDP visibility** – see native and appliance VLANs and discovery protocol information
- **Spot available network resources** – see the IP address, MAC address, subnet, and services offered by active servers, routers and printers
- **Identify protocols on the PC and network** – IP, NetWare, NetBIOS, Apple, and other protocols shown to identify mismatches and unwanted protocols
- **Distinguish service at a network drop** – determine whether a drop is offering Ethernet, phone, Token Ring, or is inactive
- **Monitor network health** – see frames sent, utilization, broadcasts, errors, and collisions – for both the desktop and network conversations
- **Problems Log** – alerts you to excessive errors, duplicate IPs, unanswered DNS queries, unwanted protocols and TCP/IP connection failures
- **Perform basic cable tests** – check patch cables or installed wiring for length, shorts, split pairs, or opens, including pin-to-pin connection

Vision into network devices and application connectivity

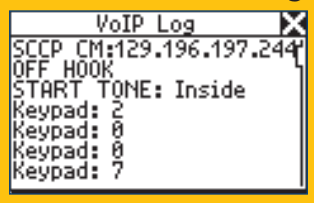
NetProve™ diagnostics



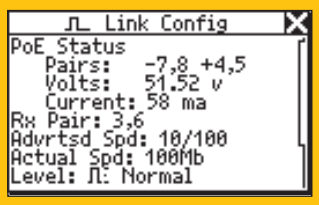
Inline vision



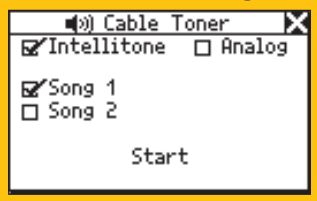
VoIP troubleshooting



PoE measurement



IntelliTone toning

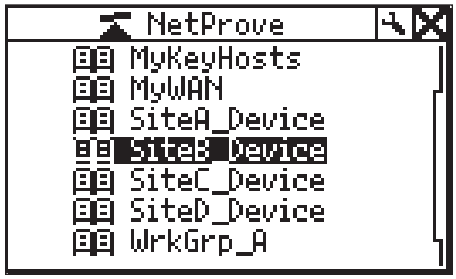


Complete documentation

Isolate device and application connectivity issues in seconds with NetProve™

Verify, isolate, and document device and connectivity problems faster than ever before with automated NetProve diagnostics. A user calls you, blaming the network, when he is unable to send an email message. Armed with a NetTool Series II, in seconds you can prove whether the network is truly at fault by seeing connectivity to key network devices and services. If the network is at fault, NetProve will isolate the source of the problem so you can fix it fast. If it is not the network, NetProve will identify which device or application port is slow to respond so you can dispatch the appropriate resource to correct the problem. This revolutionary new way to resolve connectivity issues is at least four times faster than conventional methods, resulting in improved productivity and happier users.

And NetProve improves IT staff efficiencies through improved workflow – simply create multiple catalogs representing various segments of your network. Within minutes, you can prove connectivity with up to 100 key enterprise devices and services. Do you manage remote sites? Equip less skilled personnel at remote sites with NetTools, pre-loaded with NetProve catalogs, to shift some frontline troubleshooting responsibilities to local staff.



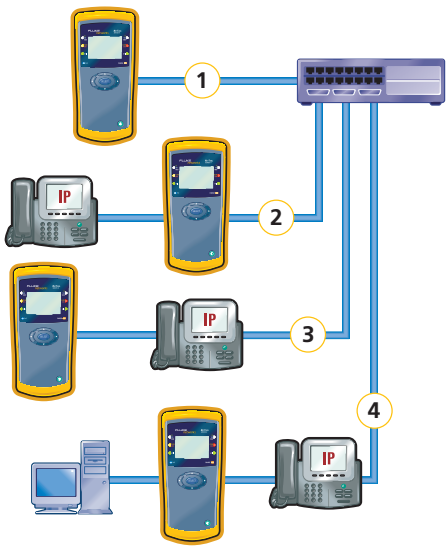
Use Netprove to build catalogs representing various segments of your network – organize catalogs by devices, applications, workgroups, and/or sites.

Inline functionality reduces troubleshooting time

NetTool Series II is the *only* handheld troubleshooting tool with inline vision into 10, 100 and Gigabit links to see the actual traffic between the network and end devices like PCs, VoIP phones, access points and security cameras. By analyzing network-device conversations, you can view detailed configuration information to troubleshoot compatibility and connectivity issues. Monitor link health and network problems, discover key devices, identify active protocols, and view segment information including VLANs and switch port.

Debug VoIP phone problems

Connect inline for visibility into real-time VoIP traffic to quickly diagnose IP phone boot-up and call control problems and to measure key call quality metrics. Qualify links as being ready for VoIP during pre-deployment assessments. Monitor VoIP calls and troubleshoot VoIP problems near the edge of your network with an immediate view into call processes, avoiding the need for complicated and time-consuming packet capture and post-capture decode. Measure key VoIP metrics, including jitter and dropped packets, to quantify the quality of an IP call.



VoIP Option testing configurations

Four testing locations shown above support the complete VoIP lifecycle with testing, monitoring and troubleshooting capabilities at the edge of the VoIP network: before phone installation, with the phone installed and cascaded off the phone.

1. NetTool to switch
2. IP phone to NetTool to switch
3. NetTool to IP phone to switch
4. PC to NetTool to IP phone to switch

Measure PoE power

Fully characterize your Power over Ethernet (PoE) links prior to the rollout of PoE services or the installation of powered devices. Verify the PoE pairs, line voltage and current to ensure a successful deployment. Place a NetTool Series II inline between a PD and PSE to troubleshoot PoE link configuration issues.

Locate cables on active networks

IntelliTone digital signaling gives you superior vision for locating cables hidden in floors, ceilings, walls and in bundles. When paired with an IntelliTone Probe (optional), this breakthrough digital technology facilitates safe and effective cable location on active networks, even when terminated at a switch. The IntelliTone Probe clearly identifies this digital signal with audio and LED visual indicators, allowing rapid isolation of the correct cable from a bundle or on a patch panel – eliminating hours of cable confusion.

Save, send, or print reports

Generate comprehensive test reports to document network resources and PC configurations – document the network, end device, protocols, key devices, VoIP log and NetProve pass/fail results. Create baseline reports for future reference. Deliver proof that the network is operating properly or, if not, document the source of the problem for trouble ticket escalation to other groups like the server or application support team.

Minimize training time, maximize productivity

NetTool is so easy to use, even inexperienced technicians can get up to speed quickly with minimal training. And it's priced so every technician can have one. By reducing the time and expense associated with troubleshooting PC, VoIP, device application connectivity problems, NetTool dramatically increases technician productivity.

FLUKE networks

The right tool for the job

Since no two networks are identical, we offer several models to match your individual requirements and to maximize the value of your NetTool investment. From our top-of-the-line NetTool Series II Pro VoIP to the entry-level NetTool 10/100, you will find a NetTool that fits your network troubleshooting needs and your budget.

All NetTool models feature an Autotest to troubleshoot the cabling infrastructure and to test active Ethernet networks. Features common across all models include cable testing, a problem log, protocol discovery, device and service discovery, and visibility into link configuration and health. The table at right highlights the key differences between NetTool models.

Feature	Series 2 Pro VoIP	Series 2 Pro	10/100 Pro VoIP	10/100 Pro	10/100 Standard
1000 Mbps Ethernet interface	•	•			
Inline device and traffic analysis	•	•	•	•	Option
NetProve device and application connectivity diagnostics	•	•			
VoIP testing, monitoring and troubleshooting	•	Option	•	Option	
Inline PoE voltage measurement and pair identification	•	•	•	•	Option
Inline PoE current measurement and single-ended solicitation	•	•			
IntelliTone digital cable location and isolation technology	•	•			
Comprehensive device and network reporting	•	•	•	•	
PC interface for data transfer	USB	USB	Serial	Serial	Serial
Internal NiMH battery charging	Option	Option			
Protective rubber boot with bail and ToolPak slot	•	•			

Ordering information

NetTool models include NetTool tester, interface cable, four AA batteries, wiremap adapter, multi language Getting Started Guide, and resource CD with Users Manual and companion utility software.

Models	Description
NTS2-VOIP	**Series II Pro VoIP** with VoIP option, 10/100/1000 inline, NetProve, IntelliTone toning
NTS2-PRO	**Series II Pro** with 10/100/1000 inline, NetProve, IntelliTone toning
NT-VOIP	**10/100 Pro VoIP** with VoIP option, 10/100 inline
NT-PRO	**10/100 Pro** with 10/100 inline
NT	**10/100** single-ended

Options and Accessories

Models	Description
NTS2-VOIP-OPT	Upgrade from NTS2-PRO to NTS2-VOIP
NT-VOIP-OPT	Upgrade from NT-PRO to NT-VOIP
NT-PRO-OPT	Upgrade from NT to NT-PRO
MT-8200-63A	IntelliTone 200 probe for Series II
TPAK	ToolPak hanging kit for Series II
NTS2-POWERPAK	AC adapter and NiMH battery set for Series II
DTX-ACUN	AC universal adapter for Series II
BATT-AA-NIMH (4)	Rechargable NiMH battery set (4) for all models
NT-AC-ADAP	AC adapter for 10/100
NT-BATT-CHG	NiMH battery charger for 10/100
DTX-USB	USB mini-B cable for Series II
NT-SERIAL	Serial cable for 10/100
WIREVIEW-1	WireView WireMapper #1 for Series II
WIREVIEW 2-6	WireView WireMappers #2-6 for Series II
NT-HOLSTER	Holster for 10/100
GLD-NT	Gold priority support for all models
GLD-NT-REN	Gold priority support renewal for all models

Free Personalization Option with registration

Register your NetTool tester and receive a personalization option free. Load your custom image into your NetTool to uniquely identify your tester. Also receive notification of software upgrades and product enhancements.

NETWORKSUPERVISION

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Fluke Networks operates in more than 50 countries worldwide. To find your local office contact details, go to **www.flukenetworks.com/contact**.

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Printed in U.S.A. 9/2006 1567676 D-ENG-N Rev H